MISSOURI BOTANICAL GARDEN

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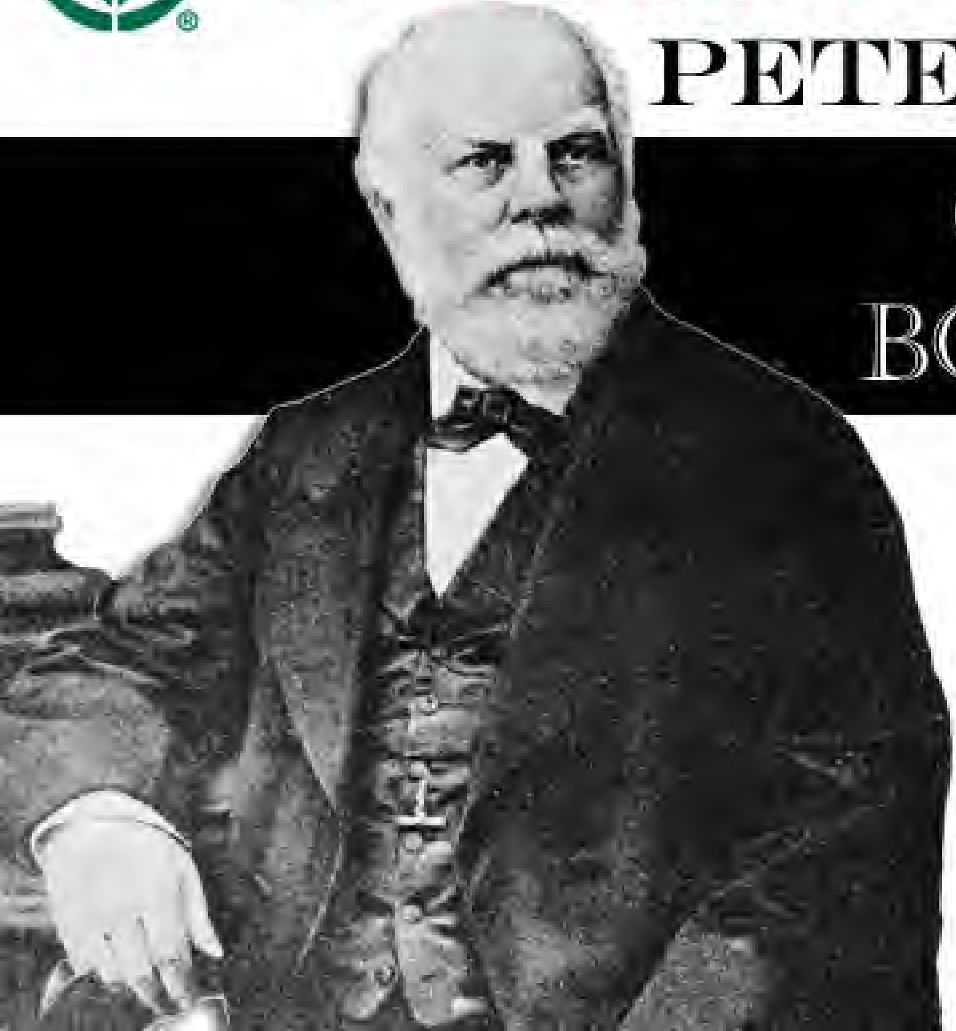


GEORGE ENGELMANN BOTANICAL NOTEBOOKS

Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

A. Sisalana Perrine
Yaxcì (Yaashki pr) Schott
Yashqui Perrine

At both sessions of the Academy, when our *savant* set forth his researches upon epilepsy, there was some discussion, on the part of different members, as to whether the convulsions artificially produced in the Guinea-pigs were really epileptic. Relative to the fact observed by Dr. Brown-Séquard of the turgescence of the mamma on the paralyzed side in a female Guinea-pig, M. Gubler stated that he had noticed and reported analogous phenomena as occurring in conjunction with paralysis in the human subject—i.e., hyperæmia of the lachrymal and salivary glands accompanying facial paralysis.

Dr. Brown-Séquard remarked that he had once had a good deal of doubt about the epileptic nature of the symptoms which he had brought out in animals; but after long comparative study, he had arrived at the conviction of the identity of the disease in man with the symptoms produced in his experiments. In reply to objections founded on certain distinctions which Dr. Chauffard had attempted to set up between the two classes of lesions, he declared that "loss of consciousness" was produced in the animals artificially made epileptic; and as to the question of epileptic anæsthesia, he could pinch the creatures, prick them, burn them during the attack, without determining other phenomena than movements due to reflex action. These latter phenomena have been perfectly well established as occurring in the human epileptic. There exist in epilepsy artificially induced, the three principal characteristics of epilepsy in man—viz., loss of consciousness; convulsive action; and intellectual torpor follow-

"Thirdly, a slight loss of bulk in the gray matter of the cord, on the side of the lost member, near the origin of its nerves, without any intimate change discernable by the microscope.

"Lastly, a remarkable shrinking of the posterior column of the cord on the side of the mutilation, attended by a condensation of areolar tissue. The atrophy extends upwards, and in the case of the loss of an arm can be traced into the medulla oblongata as far as the upper limit of the decussation of the pyramids.

"The cerebrum and cerebellum remain unchanged.

"I am aware that many details relating to this subject remain to be worked out, and I should have waited for further opportunities had not my purpose been forestalled by M. Vulpian, who has, since these observations were made, published two similar cases.

"His results differ very materially from mine. Both the cases he reports were amputation of the leg, a little distance above the ankle. In one case the leg had been removed for 47 years, in the other for 20 years. In both cases M. Vulpian describes the spinal cord as slightly lessened in bulk on the side of the amputation. This diminution affected the gray matter generally, the white matter *with the exception of the posterior column.*

"The cells of gray matter were not altered in character, or appreciably in number. In one of the cases some spots of disintegration were supposed to exist in the gray horn. No changes were detected in the nerves or nerve-roots.

from those

8184

Agave Sisalana Perrin

Florida Dr Parry leg. Febr 1874

anther 22mm – 23mm

filament (exserted part) 30

lobes 18 – 20 } perigon } flower

Tube free 3–4 } 13 – 14 } 31 – 34 } 53 – 56

adnate anth 10 } mm

ovary 22 }

8185

0.082

3400
3320
800

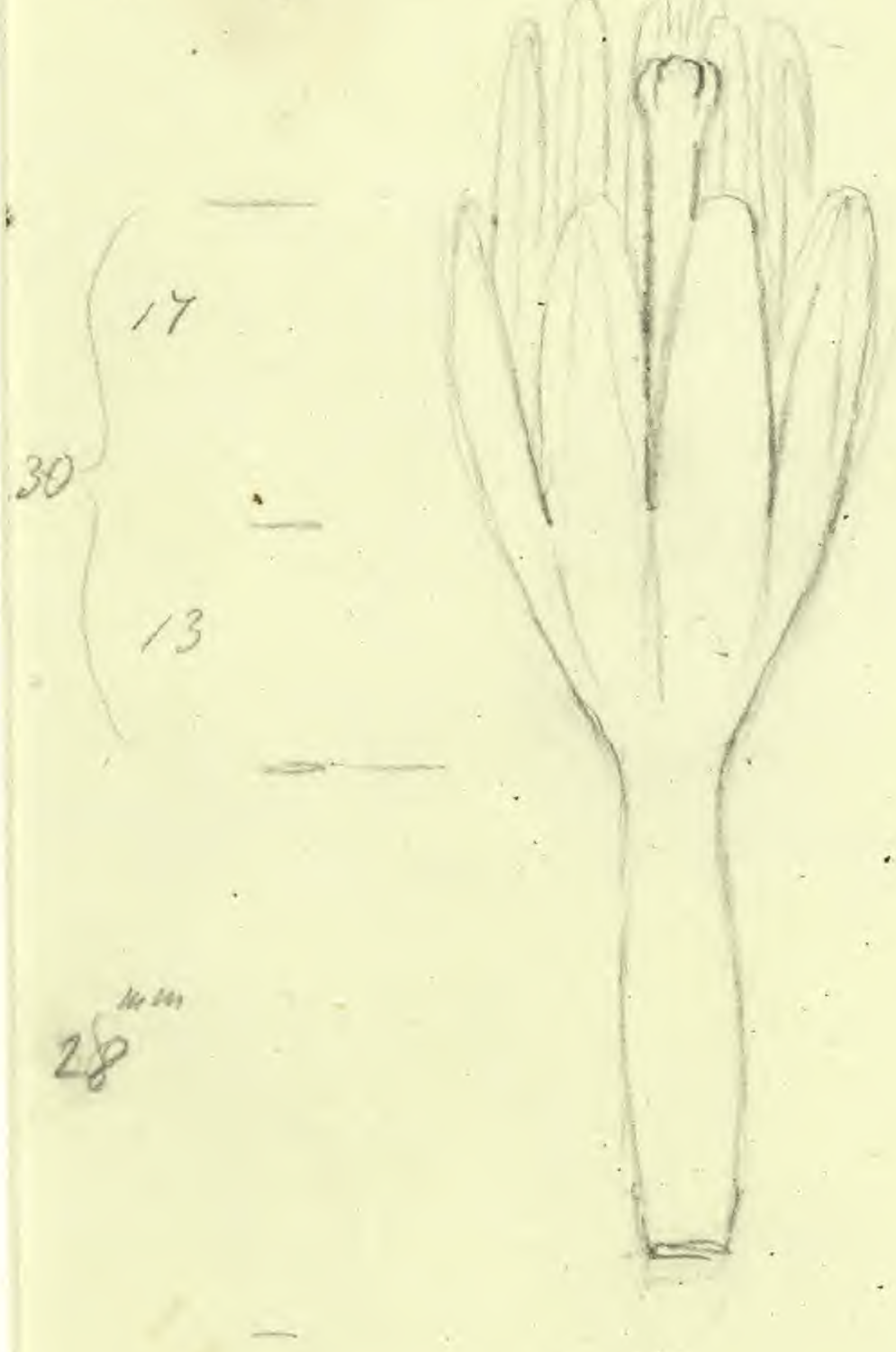
0.091

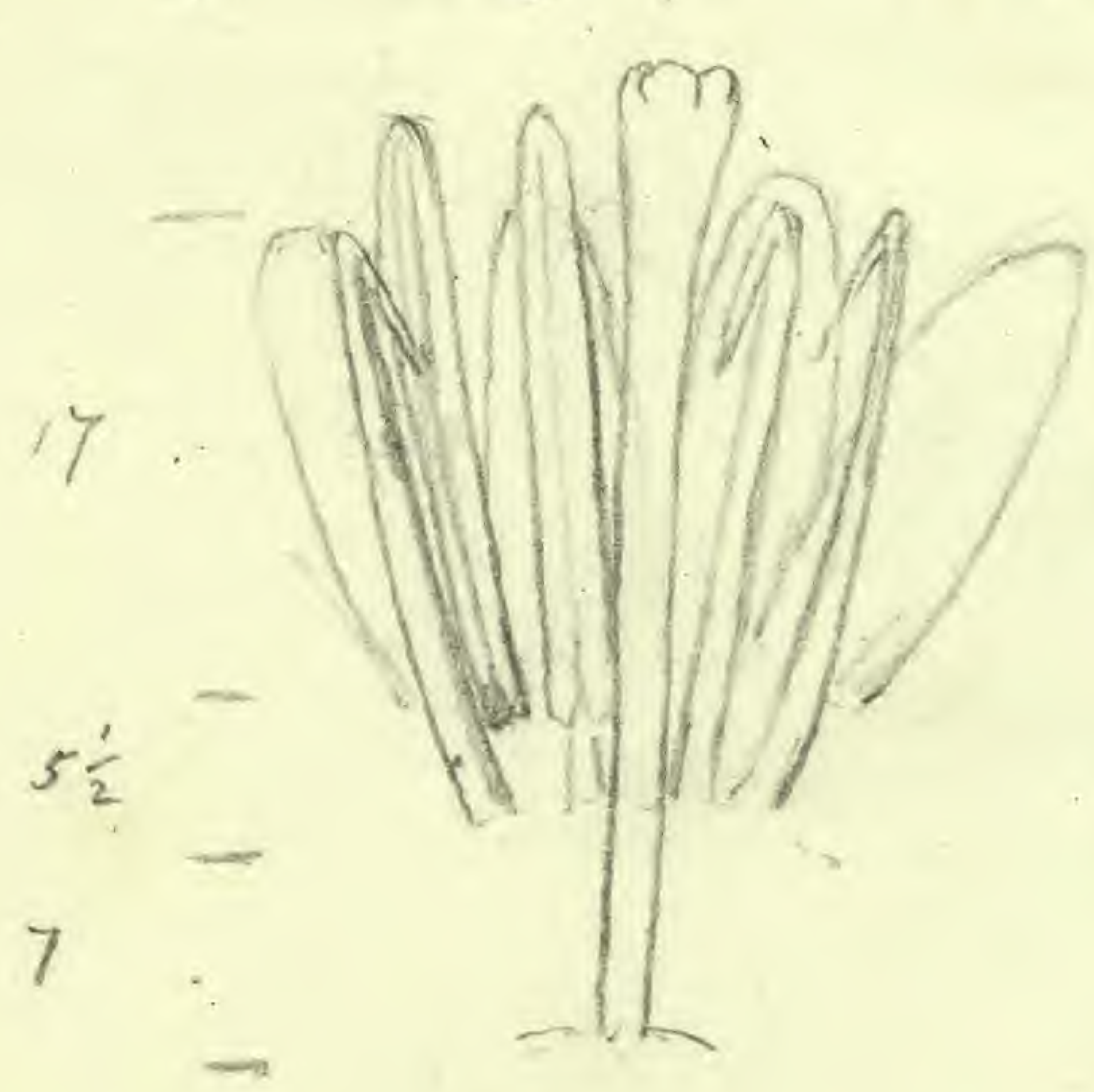
3800
3735
650

"Sacqui," "Jenequen" Agave Febr 16 1871

Merida, A Schott 202 (in Hb Torrey) Febr 1865

anther 22 mm





insertion of filaments a little above middle of tube. Tube somewhat shorter than lobes

bud, not yet developed

filaments & style when fully developed (in Hb Torrey?) nearly one inch longer than the perigon

This, Schott says, is the cultivated variety, with leaves 4–5 feet long

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Leitch & Corlies
DRUGGISTS
South-west Corner Fifth and Market Streets

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"chelem" Agave Febr 16 1871

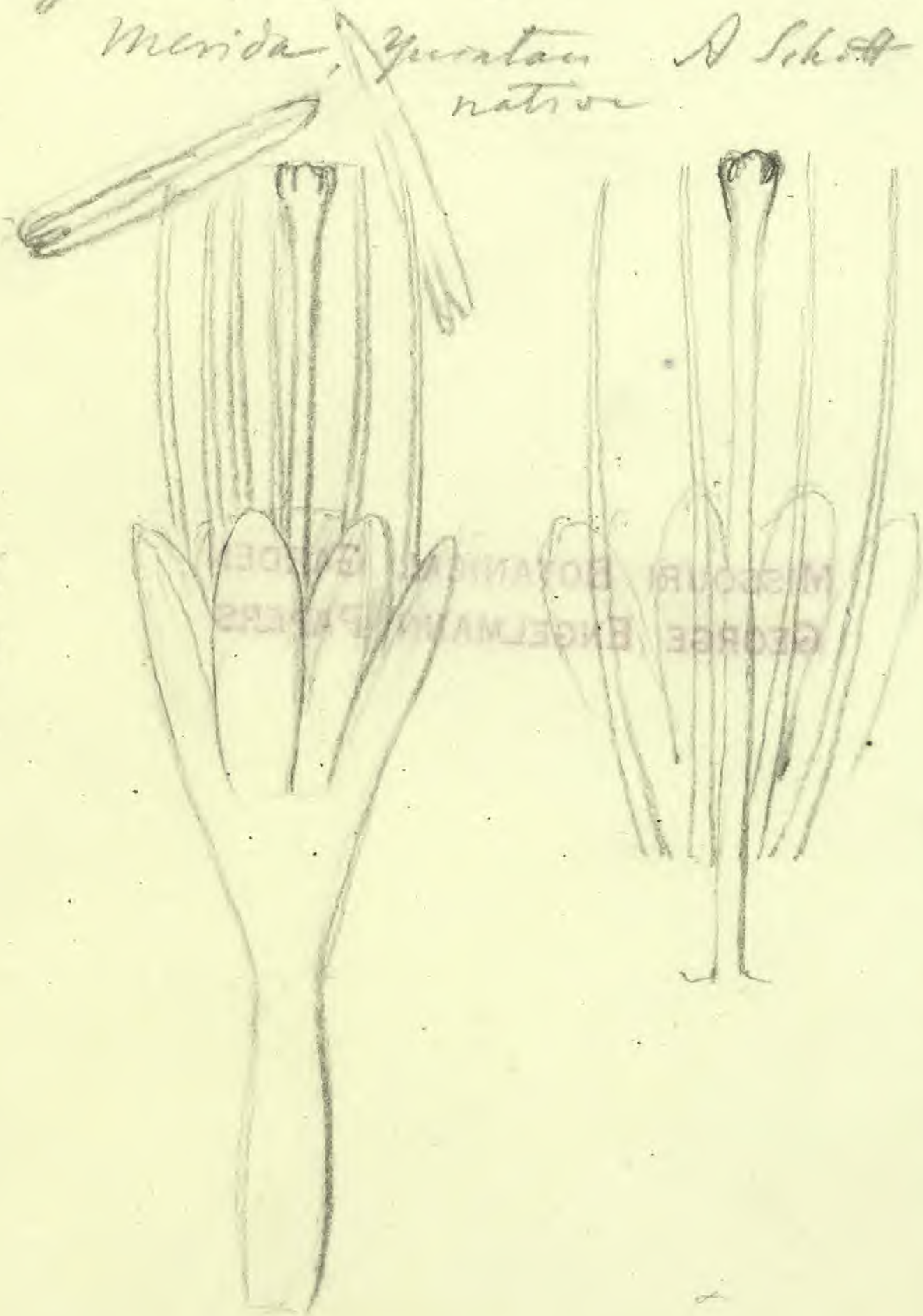
Merida, Yucatan A Schott № 201
native
Febr. 1865
(: W Torrey ?)

bud
18
12 {6 6
30

23 filam.
without flow
20
9 {4 5
29
14 {6 8

anther 22 mm

Ovary 22 - 23



This is according to Schott the wild plant, leaves 1 1/2 - 2 feet long

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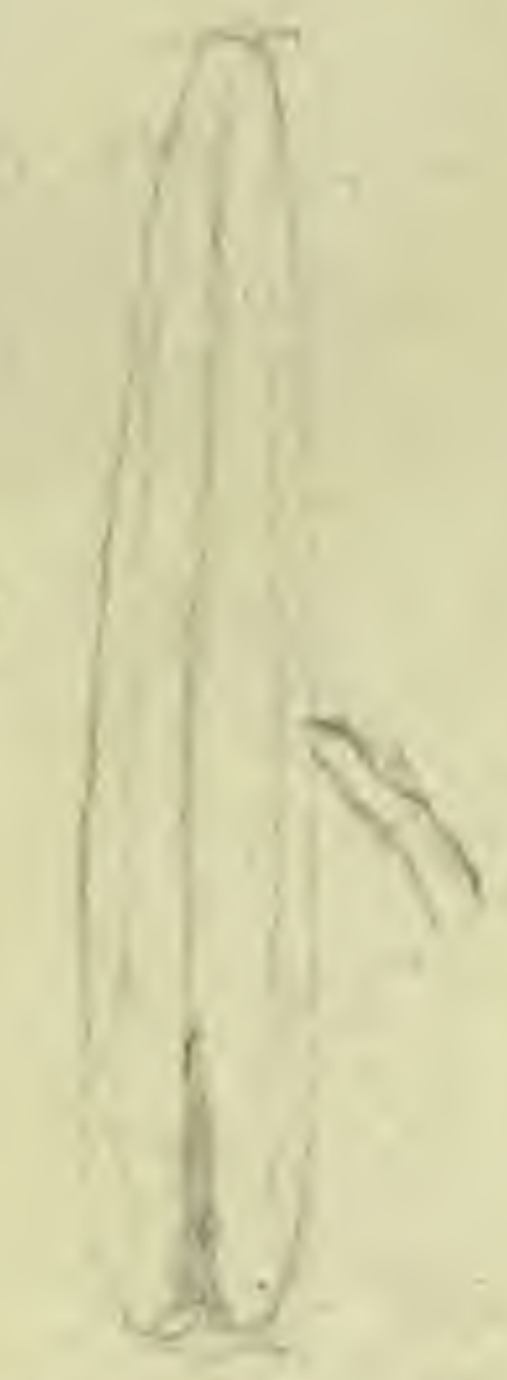
DRUGGISTS
South-west Corner Fifth and Market Streets

"Agave Sisalana" Perrine
Dr Parry Key west Florida
Febr 1871

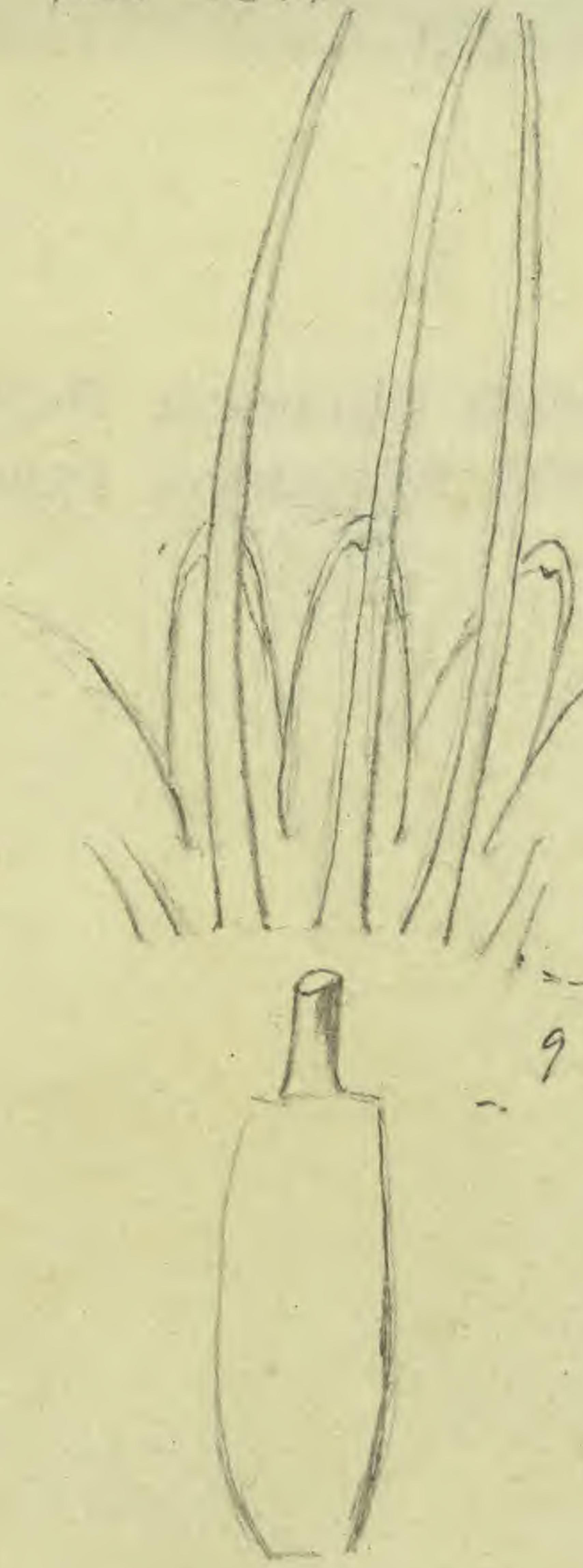
July 18" 1871

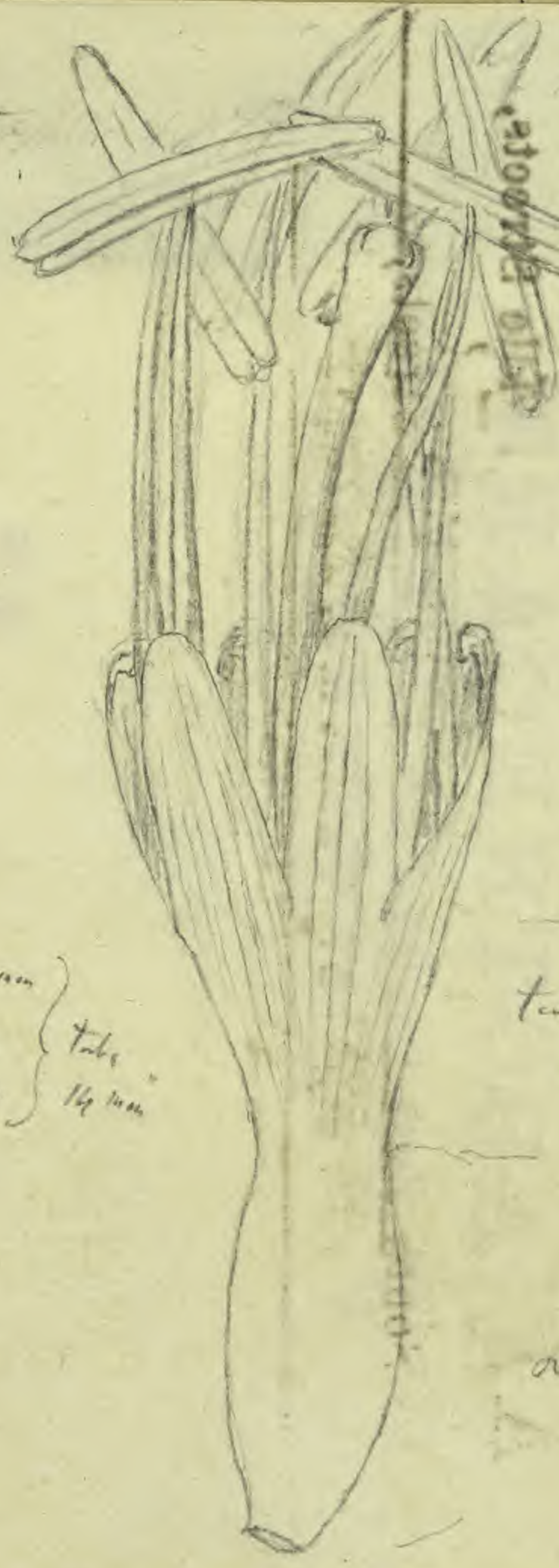

anther 24 mm long attached just below the middle

Diameter of Pollengrains x415

$\frac{34-38 \text{ mm}}{415} = 0.08-0.09$

exterior lobes of perig. 7 ribbed, interior ones strongly 3-ribbed





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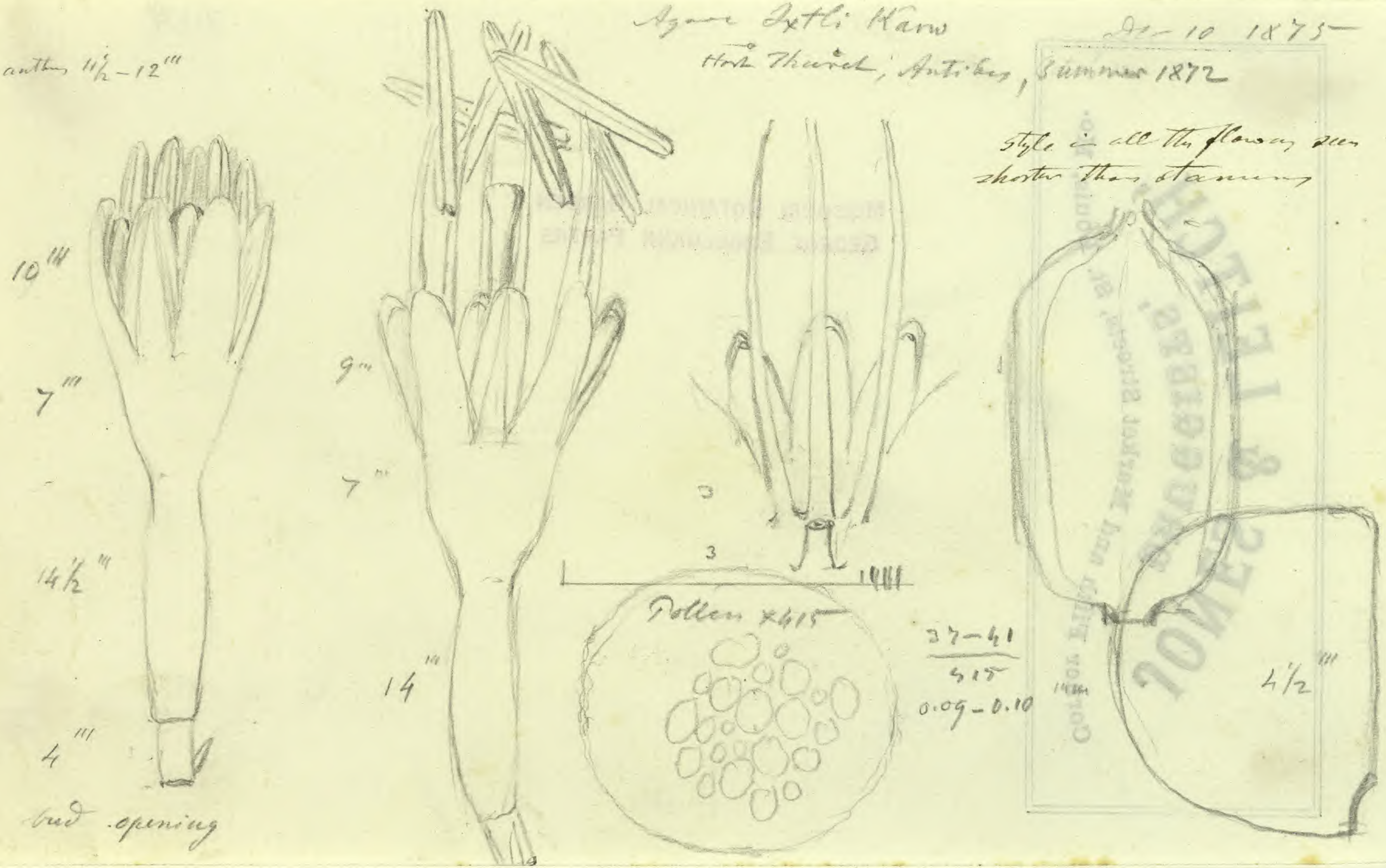
Agave Ixtli Karw

Hort Thuret, Antibes, Summer 1872

Dec 10 1875

anthers 11½–12'''

Style in all the flowers seen shorter than stamens



$$\frac{37-41}{415}$$

0.09–0.10

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JONES & LEITCH,
DRUGGISTS,
Corner Fifth and Market Streets, St. Louis, Mo.

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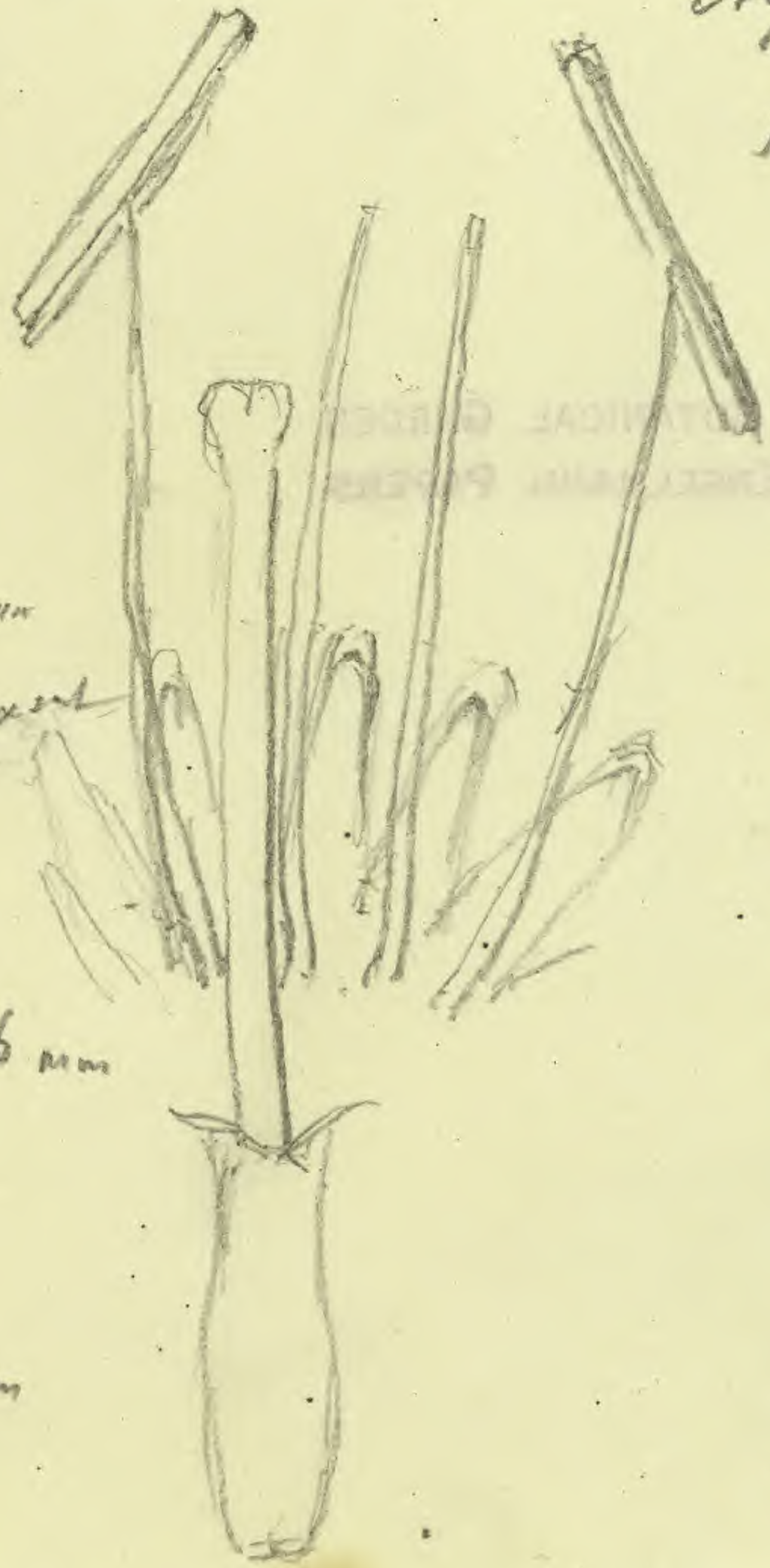
Agave sisalana Oct 14 1885
" acaulis "

A H Curtiss, Florida



style 50 mm

anth 25 exsert

st 20

20 }
16 } 36 mm

5½ }
10½ }

25 mm

lobes a little longer
than tube

anthers at about the
upper 3d of tube
(above the middle)

perianth 36 mm
(lobes 20, tube 16 mm)
longer than ovary

style undeveloped yet

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Leitch & Corlies

DRUGGISTS

South West Corner Fifth and Market Streets

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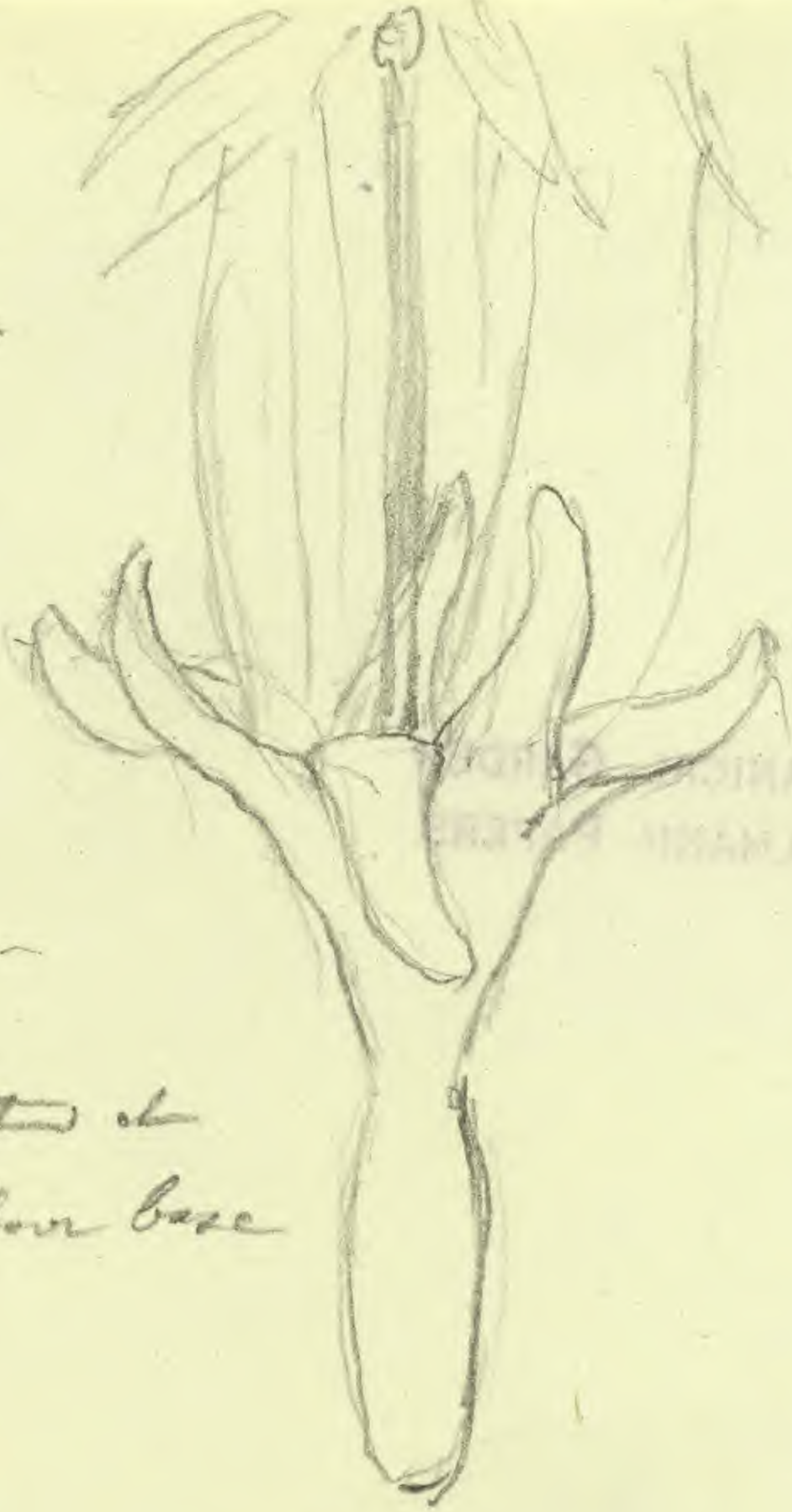
Agave Sisalana
Key West, Febr 1882
A. H. Curtiss

Febr 17 1882



anthers 22 mm

style 28 (+32)
± 60 mm

fil 24 mm
longer

lobes 17 mm long

tube 15 - free 5
fil. adnate 10 -

filaments inserted at
about 2/3 above base
of tube

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8191

JAMES McBRIDE,
Pharmaceutist,
No. 280 Fifth Street, near OFallon,
Saint Louis.

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~~Corymbiflorae~~
Paniculatae

Agave Sisalana Perrine 1838 in Congr. Rep.

Subcaulescens foliis carnosis glaucis, lineari-lanceolatis, in aculeum robustum teretem fusco-atrum acutissime excurrentibus, marginibus cartilagineis integris s. sparsim pallide denticulatis, rare irregulariter hinc inde brunneo aculeatis.

Scapo elato in ~~florum~~ paniculam amplam (4 ped. latam) ~~gerente~~; flores numerosissimos flavo-virescentes gerente

ovario quam perigonium breviore, lobis tubo perigonii infundibuliformi longioribus, staminibus supra tubi medium (in 2/3) insertis plusquam dimidio exsertis.

Scape 20-25 feet, panicle 15 feet long, 4 feet in diamt. leaves 4-6 feet long, 4-6 inches wide — flowers without stamens 28 lines long 16 of which belong to perigon. Flowers very similar to that of angustifolia — exter perig lobes 7 nerved, inner ones 3 nerved anthers 24 mm long = 1 inch — bulblets form on the panicle after over

the falling of the flower and never(!) maturing ovary

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A. Sisalana (continued) Flower

1

Agave Sisalana. Perrine?

by Dr Parry Feb. 1871

Introduced into Key West Fla

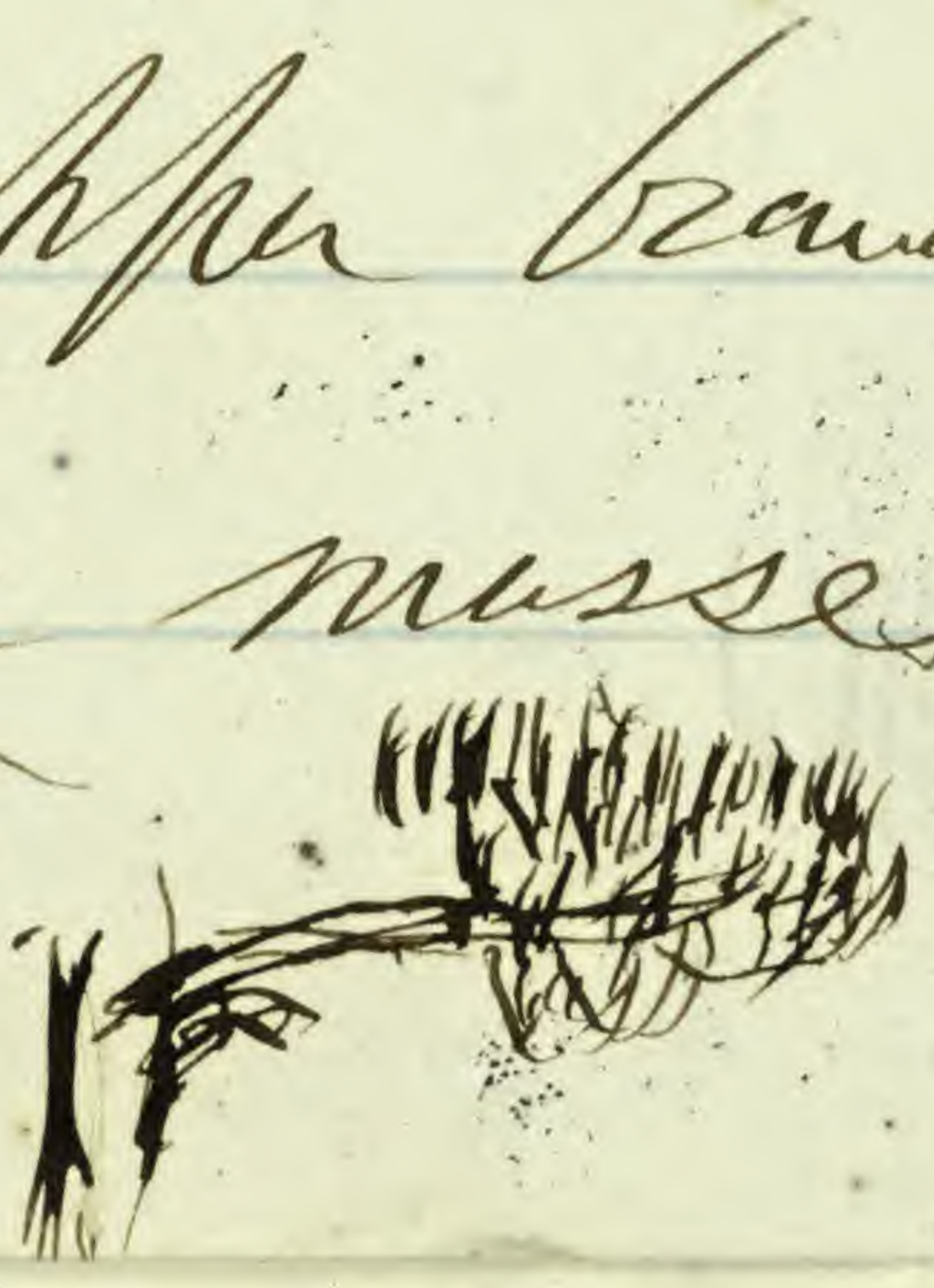
30

20 years ago by Dr Perrine

now covering large tracts of country used as hedge plant. increased by offsets. & bulblets produced on the scar where the flower falls off — never? perfects capsule or seed —

Measurements of specimen

Flower stem 23 ft, diameter above the clustered leaves 4 inch. height to 1st flowering branch 8 ft. No of branches 35 — longest branch near middle of stem 2 ft. lower & upper branches shorter. flowers in dense masses forming a flattish top head.



8193

ly leafy b
in the fl
cluster
with ovar
ule matur
t clusters
4 inches
und & ra
4 to 6 f
cartilagin
ded with
plant),
& form
tipped
greenish yell
favorabl
less favo
in Ma
is ext
machin

bulblets.
ons of full

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A Sisalana continued) flower stem &
ended by leafy bracts which continue in
iral on the flowering stem passing into
dense cluster of lower leaves
fl. with ovary attached falls off before
capsule matures & from the scar
vs out clusters of bublets which often
, 3 or 4 inches & then detatch & fall
the ground & root
leaves 4 to 6 ft long, mostly with
mooth cartilaginous edges or occasionally
sparsely set with mucronate points (on
the same plant) 4 to 6 inch broad tapering
downwards & forming a broad attachment
at base. tipped with a hard mucronation
fl. greenish yellow (see specimens)
Plants in favorable locations mature in
3 years less favorable 5 years
flowers in March — The fibre of
the leaves is extracted by hand. no
suitable machine being yet introduced

Sent fl. & bulblets. leaf of young plant
Specimens of full sized leaf too large to send
un

Notes Agave Sisálana

8194

Dr Parry, Washington, July 25 1871

A. Sisalana. Key West undoubtedly derived from Perrines plants. The *same plant* has both *smooth* & *spiny edged* leaves! but *more commonly smooth*. I suppose I sent you young plants if not we still have plenty. Schott did not seem to be clear about the matter when I showed him our specimens. he said that in Yucatan they *did not allow the plants to flower*, as the leaves were the valuable parts so he never saw the *Sisal hemp* in *flower*.!

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I send by mail. a complete leaf of A. Palmeri. I never saw any flowers "No 4". all went direct to you — the capsules of A. Parryi I may have seen at the west, but none here — Have you yet seen the photograph sketch in Kansas Pacific Set. of plants of A. Parryi with capsules attached. taken in Jany. 1868 — ?. There is an Agave on East side of Sierra Nevada back of San Diego which I saw in flower in 1849. It was used for Mezcal. did not grow very large. had large sized flowers not very close together. I think I made notes (but where? we called Everything then A. Americana. This might be got again

Yours
C C Parry

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over

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Agave ~~angustifolia Haw~~? rigida Mill

~~Brevi~~ caulescens, foliis fibrosis lanceolato-linearibus (1½–2' longis) margine aculeato-dentatis (aculeis minoribus e basi lata (compressis gracilibus) rectis corneis fuscis) in aculeum corneum rigidum (20 lin. longum) robustum fuscum teretem basi supra canaliculatum excurrentibus

Scapo elatiore, demum viviparo

floribus dense corymbosis, ~~tub~~ ovario perigonio paulo breviore, tubo infundibuliformi lobis breviore filamentis medio tubo (vel supra medium) insertis, longe exsertis antheris ovarium fere aequantibus, perigonii lobis longioribus.

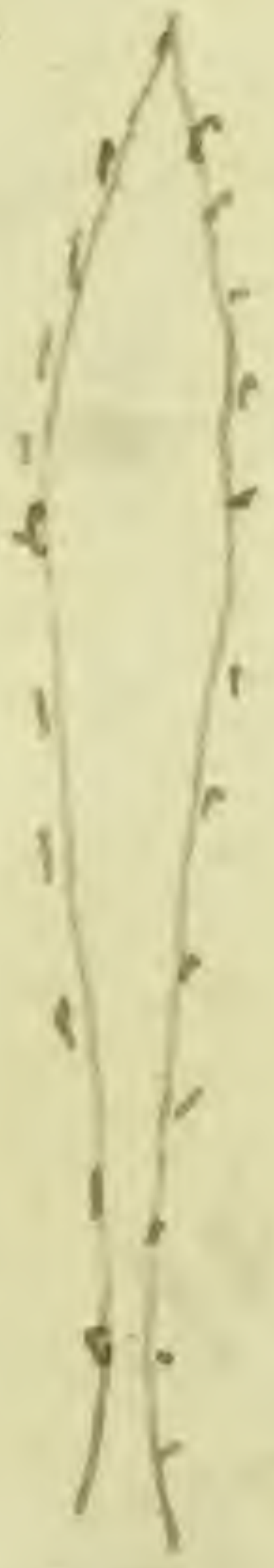
Leaf coll. by Schott is 21 inches long, above the middle 19–20 lines wide – spines about 10 lines apart, 2 l. long not large terminal spine 9 l. long tapering very acute, terete, with a shallow groove at the very base

over

8196

A. Schott, Apr 1870, writes

What I had named Agave prolifera is probably A. angustifolia Haw, common in Yucatan, native, and probably the original stock of the cultivated Sacci', and of which I collected only flowers, no leaves. It is called Chelem. — Yes there is a leaf!!



Leaves 1½ – 2 feet long, linear-lanceolate lance shaped, dry, woody.

Most varieties of Jenequen are domesticated and improved forms of this (except Yaxci' of which I have not seen the flowers)

Sacci' has leaves, sometimes 5½ feet long — but is the same thing

Aug 1871

Dr A Schott, on Jenequen or Sisal Hemp
in Agricult. Report for 1869 - Washingt 1870
with plates [plates in my notes on Agave] pag: 257

In Yucatan 7 species or varieties of Jenequen are recognized

fl. leaf coll Schott — 1. Chelem [rigida] [pr. Tschelem] the common wild plant, smaller than the cultivated plant

fl. coll Parry Florida — 2. Yaxci [pr. Yaashki], green [var. Sisalana] not glaucous like the others, leaves shorter than in other varieties - most delicate fibre p. 260; leaves subinerm, occasional spikes interspersed with granules

fl. coll Schott. — 3 Sacci [Saqui] white waxy bloom, cabbage like. furnishes most of the merchantable fibre - A good plant yields annually 25 leaves of a pound each, furnishing together 1 pound of fibre

4 Chucumci [pr. Tshucumki] similar to last, but larger, with much coarser fibre

5 Babci [Babki] more leaves, but of smaller size, fibre fine, but quantity smaller.

6 Citamci [Kitamki] leaves short, narrow, poor fibre

fl & leaf coll Schott — (7. Cajum [Kahum] an indigenous wild plant, a Fourcroya). thin linear heavily armed leaves, 4-5 feet long - leaves parched, to obtain the fibre

The names of all the cultivated forms (2-6) terminate in ci which means Agave

p. 260 Dr Schott has seen only a few leaves of the Yaxci, and they are fleshy, green, with occasional teeth, interspersed with granular excrescences

p. 261 Jenequen fields yield a return only after 4 or 5 years, but continues fruitful for 50 or 60 years (the flowering stem being cut off when it is 4 feet high) : Expense and yield

p. 263 Propagated by shoots or offsets [~~bulbs not mentioned!~~], from the ground

p. 264 Viviparous habit; young plants from the nodes as well as from the place where flowers should be

Scapes 12-15 feet high (~~in letters 15-18 feet~~)

265 5-10 millions pounds of Jenequen exported annually to U.S

Schott in litt.: Only 1 & 7 are natives - the others all cult. varieties the different forms cultivated in different districts

- - All the Agaves I have seen in Yucatan are very sharply armed; only Yaxci is green, not glaucous, and incompletely armed [toothed]

I collected flowers of 1. Chelem, with deep purple

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stamens and of 3 Sacci, with pale greenish white stamens, no other distinction. In both the venation is much more distinct than in Americana. — The native A. angustifolia (Chelem) I have seen with leaves up to 2 feet long.

The largest leaves of the most commonly cultivated Sacci (No 3) I found 5½ feet long.

The leaves of the Cajum, towsroye, are 5–6 feet in the wild plant, and ensiform; scapes 15–18 feet high.

Yaxci has an almost unarmed leaf (and said to originate from the Cajum.

All the forms are glaucous except the last two, Cajum & Yaxci which have bright yellowish green leaves.

Flowers

Virginian Lemberg 1864 with bulbilli

	Chelem	Schott Yuc		Sagui		Schott Yuc	Yashki Parry Flora	1871 Antibes cult
anthers	~~22~~ mm	22 mm		22 mm		24 mm	31 green	24 m
exsert part of filament		23				30		20
lobes		18–20		17		18	22	21
perig	30–34		30		32		42–47	34
tube		12–14		13		14		13
free part	6		6	6	5			6
adnate filam	6–8		7		9			6
ovary		22–23		28		24	42–47	28
whole flow							86–92	

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GEORGE ENGELMANN PAPERS

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Society, seems to have been lost since the sale of that collection; it must have been similar to ~~the cone of~~ Newberry's cone of *fallax*, described above.

The following species have been claimed for the real *amabilis*: *A. subalpina* is called so by Parlatore l. c. who seemed to rely on its native locality and on its leaves (or many of them) being entire, but overlooks other characters. — Var. *fallax* of that species, taken for *amabilis* by Newberry has a large~~r~~ cone ~~with~~ and similar bracts, but is not in cultivation, as Douglas' tree is supposed to be. — *A. magnifica*, the *amabilis* of the Californian botanists, has the large cones, the lanceolate bracts and the entire leaves, ~~of~~ claimed for *amabilis*, but the foliage is quite different, and so ~~is~~ is its locality. — *A. nobilis*: Prof McNab find the leaves of the type specimen (in Herb. Kew) of *amabilis* identical with *nobilis* leaves; I have examined the same leaves and take them with scarcely a doubt for those of a form of *grandis*; — Locally the "yellow fir" of Oregon, as *Pseudotsuga Douglasii* is oft called, seems to have also been taken for *amabilis*, perhaps on account of its entire leaves.

8198

Dr Garber writes April 21 1879 from Manatee, Florida

Agave rigida: var. [Sisalana] trunk 1–3 feet; leaves long thick, glaucous, no marginal spines, mature and withering leaves recurved , scape 20–30' high bearing pods and bulbs; usually on different plants. — Common on Key West and other Keys on the Atlantic coast, at Fort Dade and on Miami River, not seen on Gulf coast. K. 2½–3 inches long.

Agave rigida var. Trunk 6–8 feet long, ascending, leaves 3–4 feet long 2½–3½ inches wide. ½ inch thick, half as thick as the last. older leaves of the flowering stalk dry and reflexed abruptly — scape as high as the last, also proliferous flowers apparently same — panicle also proliferous — no pods seen

Very common on the shell formations on the Gulf coast, from Manatee southward. — Only a few small plants seen on the rocky Atlantic coast at Biscayne Bay

[neglecta]

[decipiens, Sec. Herb.]

July 1871

Agave Sisalana
A. Pulqueana
A Mezcal

are names only, without botanical or recognizable description ~~occurring~~ in Dr H Perrine's Memoire (Senate Document 300, March 12 1838) in a list of plants, pag 105.

They seem to be Dr Perrine's names.

p. 36 The „Henequen" furnishes the coarse fibres called Sosquil or Sisal Hemp.

The "Istle" furnishes the fine fibres, called Pita

p. 37 Yashqui - henequen

p. 38 the Yashqui - henequen yields the best quality, the Saqui, the largest quantity of fibre

These two are the cultivated fibre plants

Chelem, Cahum Chucum-qui etc are wild fibre plants

~~Yashqui~~ is Saqui, ~~Schott~~, figured by Schott with spinous dentate leaves, trunk, large panicle.

Agave Sisalana, Sisal Hemp, Yashqui is figured by Perrine with entire leaves and short trunk

Henequen of Perrine is called by Schott Jenequen or Sisal Hemp.

Schott in Agricult. report for 1869 p. 257

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Our Meetings during the past year have been regular, but few members only, half a dozen perhaps, ~~have~~ generally bring ~~brought~~ their scientific contribution to our meets, few ~~longer~~ important papers have been read; and scarcely any ~~no~~ material has been furnished for a commencement of a third volume of our transactions. But though no number has been published since 1868, our exchanges come in regularly and ~~with~~ in the spirit of ~~true~~ the ~~scientific~~ liberality of science.

+ We meet, as has been stated, at this hall ~~temporarily~~ provisionally allowed us by the board of public schools, free of charge.

Our ~~finances~~ exchequer is empty, ~~but~~ we may say ~~as~~ so far in a tolerably flourishing condition as we are now almost free of debt, our treasurer having paid ~~paying now~~ the last instalment due to the Missouri Republican office for printing the last number of our Transactions.

+ (Many new members have joined us during the year, but few of them ~~meet~~ join with us in our ~~semi~~-monthly exercises.

but most of them do give us only their passive countenance and

The number of ~~paying~~ associate members amounts now to 72 who pay the [illegible] regularly

This is the present status of this Academy and without some essential change it must perish that will gradually die out.

As a means to revive it, it seems to be absolutely necessary to interest the public more in its existence and its doings ~~and~~ and this is the great and important point — to draw to us all such active forces as may exist in the city — and to make

12 / 13

6078 / 5659

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

Aug 1871

Dr Perrine's Report, Senate Doc. March 12 1838

p. 24 [Agave Sisalana] -- a native plant of this Peninsula [Yucatan] (which may take its name from the exporting port of Sisal)...

p. 36 "the Agave Sisalana of the subscriber ...."
-- by the flowering of a plant of the Yashqui, a kind of Henequen, in its 15th year

p. 37 "the absence of thorns on the edge of the leaves of the Yashqui -- the Yashqui Henequen -- the corolla is bellform, its segments converging and longer than the tube; the very long filaments are awlshape and inserted into the base of the segments or near the top of the tube -- the style is very little elevated above the segments of the corolla when its 3 lobed stigma receives the pollen from the bursting anthers. --- cylindric capsule --- subdivided branches and branchlets -- stately stalk --

p. 38 The Yashqui yields the best quality, the Sacqui the greatest quantity of fibre

Chelem, Cahum, Chelul-qui (wild varieties)

Paper made of Henequen.

Plate 1. a leaf of sisal hemp, Yashqui, "5 feet long, 3-5 inches wide"

Pl. 4 an entire plant. (with short trunk) no flowers

Dr Parry saw the plant, March 1871 in Dr Perrine's plantation at Key West, & now covering large tracts of country. He gives the following measurement: (He says nothing of a stem)

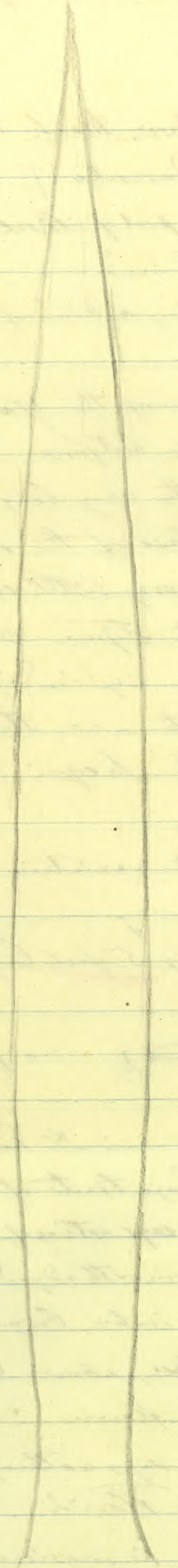
leaves 4-6 feet long mostly smooth edged -- occasionally with sparse mucronate points √ -- 4-6 inches broad
or with irregular sharp spines especially about the middle

Scape 20-23 feet, 4 inches thick at base, above leaves; hight to panicle 8 feet
panicle 14 feet long, 4 feet diameter, flowers in dense masses, bulbillifera (of which Dr Perrine says nothing)

Seems to be used for the fibre in Florida.

Dr Parry writes Aug 1st 1871: The Florida A. Sisalana is occasionally beset with sharp thorns, in collecting bulblets I was obliged to use care in climbing. they are quite irregular, often wanting

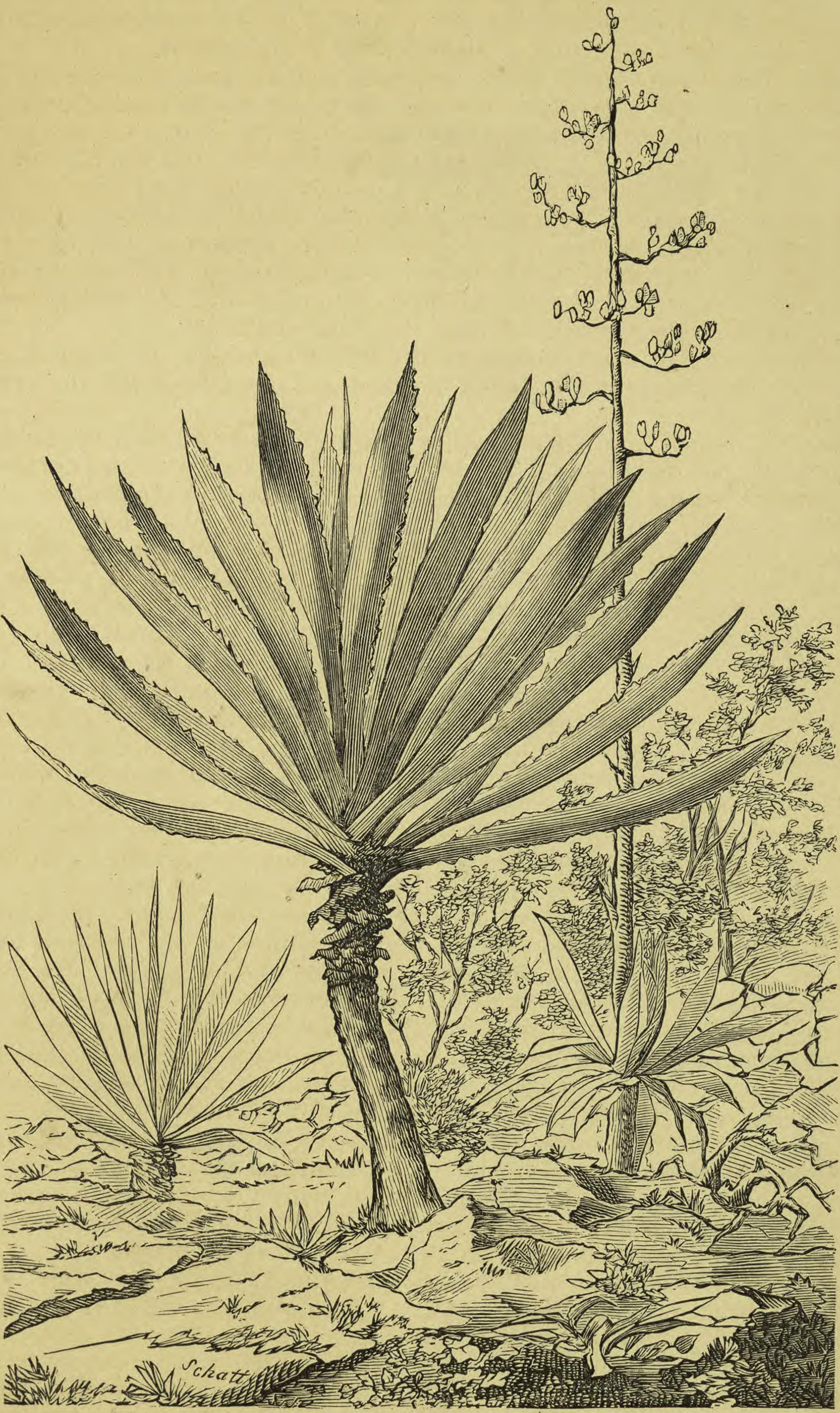
8200



Leaf of Sisal Hemp.
(2 inches to the foot)
width about 1/12 of the length (or 1/15)
according to Perrine and Parry

from Agricult. Report for 1869
pag. 258

PLATE XXIII.



THE SACCHI.

Saci Sacci, Saqui

Agave rigida var. cult.

Sisal Hemp Yucatan Dr A Schott

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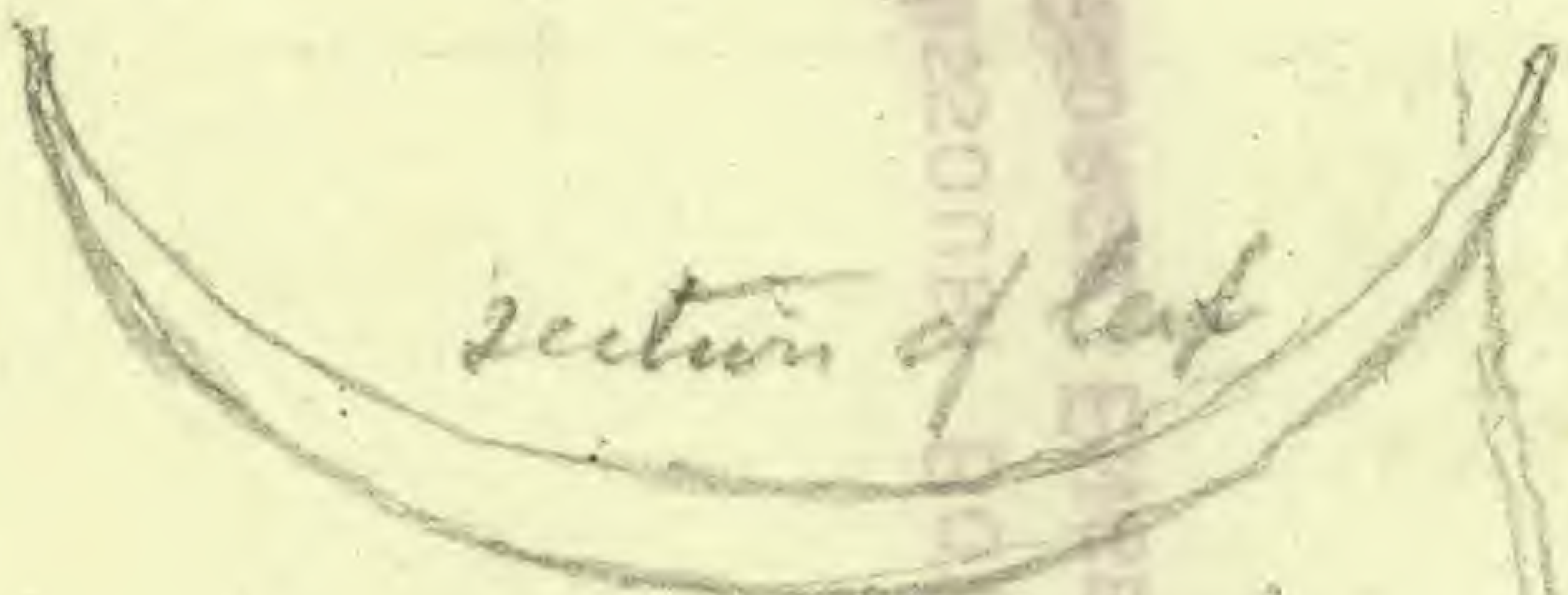
MISSOURI BOTANICAL GARDEN

Agave rigida

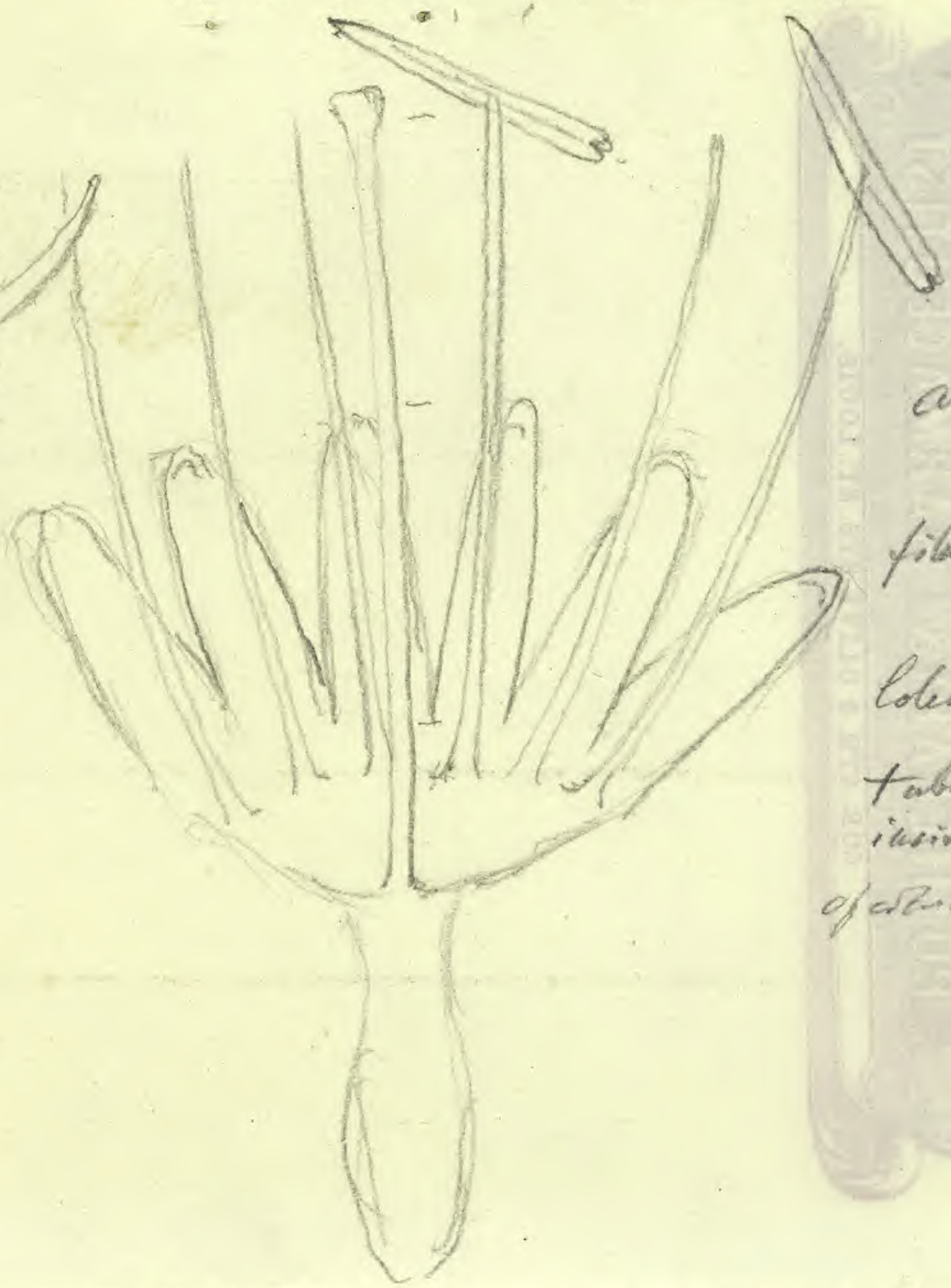
March 31 1882

South Florida, A H Curtiss March 1882



section of leaf

Thin tough
very fibrous



anthers 23 mm
long, acute
filaments 21 mm
longer than lobes
lobes 24 mm
tube 12 mm
inside
of which 4 mm free
8 - adnate
to stamens

[illegible]

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MISSOURI
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ALEX. LEITCH
APOTHECARY & PHARMACEUTIST
COR. 4TH & OLIVE STS. ST. LOUIS.

8202

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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
365	50.4	55.8	61.8	63.3	59.3	54.7
1866	48.4	54.6	60.3	61.9	57.9	53.4
1867	48.4	54.2	60.0	61.4	57.4	53.3
Mean :	48.6	54.6	60.7	62.2	58.2	53.5

RELATIVE HUMIDITY.

1861	86.4	71.3	60.3	57.2	65.1	77.3
1862	85.3	70.6	60.0	57.5	67.6	78.0
1863	86.8	71.4	60.2	58.0	66.7	77.9
1864	83.9	69.3	57.7	55.0	64.0	74.8
1865	84.7	71.7	61.3	59.0	68.3	78.9
1866	84.9	70.1	60.6	58.6	67.4	77.8
1867	83.1	68.4	57.9	55.0	64.6	75.4
Mean :	85.0	70.4	59.7	57.2	66.2	77.2

rigida Mill
angustifolia Haw?
speratan
Chelem, wild
(Sargenti cult)

8203

2.—*Monthly Mean of Temperatu* *ity in 186*
based upon daily observatio *ntemporaneous with those of A*
pheric Electricit

TEMPERATURE.

YEAR.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean of Year.
1861..............	32.2	40.4	44.8	58.1	64.1	76.9	77.5	78.6	69.1	57.9	46.0	39.7	57.1
1862..............	28.9	30.2	43.2	55.0	69.7	75.1	81.2	80.7	72.1	57.3	42.6	41.3	5.64
1863..............	36.8	35.7	43.6	57.4	65.5	71.9	77.2	77.5	69.2	48.0	43.7	35.9	55.2
1864	29.2	38.3	40.7	51.4	69.4	78.9	83.5	78.8	72.9	53.1	44.9	30.4	56.0
1865..............	28.1	38.4	46.7	56.8	68.8	80.7	77.7	78.1	77.8	58.8	48.0	30.8	57.5
1866..............	32.2	33.4	42.2	61.2	66.3	75.3	82.2	76.8	64.0	59.3	46.6	33.3	56.0
1867..............	25.4	39.1	34.1	56.7	61.1	76.9	81.3	81.4	68.5	59.6	49.2	36.1	55.8
Mean..........	30.4	36.5	42.2	56.7	66.4	76.5	80.1	78.8	70.5	56.3	45.9	35.4	56.3

RELATIVE HUMIDITY.

1861..............	72.2	63.3	64.5	61.5	66.3	70.8	66.3	69.6	77.3	76.6	69.0	74.3	69.5
1862..............	85.3	73.9	70.8	67.0	57.3	67.0	66.8	64.3	74.2	67.2	69.5	74.6	69.8
1863..............	79.2	81.7	68.1	57.2	59.4	67.7	68.6	70.7	68.2	74.4	67.4	79.5	70.2
1864..............	75.6	62.7	70.0	69.8	56.4	61.5	62.8	69.0	64.1	67.9	74.2	75.5	67.4
1865..............	74.6	72.0	66.1	66.8	62.1	67.9	77.4	71.7	76.8	74.1	62.3	78.8	70.9
1866..............	75.1	70.6	69.1	60.6	59.7	66.0	68.2	66.7	81.8	71.7	72.5	76.8	69.9
1867..............	76.2	73.5	75.7	59.1	61.4	64.8	63.9	60.0	63.7	67.9	64.9	77.6	67.4
Mean..............	76.9	71.1	69.2	63.1	60.4	66.5	69.0	68.7	72.3	71.4	68.5	76.7	69.3

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[This sheet enclosed sheets 141 = 152] 140

Agave rigida Mill. dict. ed 8 (1768) fide Kunth p. 843 ~~[illegible]~~.

Fourcroya rigida Haw. Syn. 74 (1812) & Kunth p. 843

Miller says fide Haworth: foliis lineari-lanceolatis ~~superne~~ integerrimis, rigidis, aculeo terminatis: ~~Agave ½ 8.~~ from Vera Cruz

Haworth says: foliis lineari-lanceolatis superne integerrimis, ipsa basi serrato-spinosis

Fourcroya rigida Haw. Kunth 5. p. 843

~~Agave~~ Fourcroya rigida Haw. De Spin in Cat. sem. Hort. San Sebastian (Turin ~~1809~~ 1812) c. tab. & descr. (the dates from Kunth & Pritzel)
subacaulescent leaves 15" × 2⅓, with a "solid" terminal spine

Agave angustifolia Haw. Syn. 72 (1812) caulescens, foliis angusto lanceolatis glaucis dentato serratis. Folia angustissima omnium. Kunth. 837. sane Dragonis!
Haw. in Enum. Saxif. p. 35 (1821) only adds that plants have been brought from St Helena

It seems that Salm in Bonpl. 7. p. 90 has united both and that Jacobi pag 94 follows him, but not so very much after copying de Spin's notes

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Agave rigida Mill ed 8 (1768) Jacobi 94 is the oldest name — plant from Vera Cruz. caulescens; leaves 15" × 1½" prolifera

A. Ixtli Karwinski ap. Salm in H. Dyck p. 304 & Bonpl. VII. p. 90 (1859) Jacobi p. 95 from Yucatan, placed by Jacobi side by side with the former, must be the same subacaulescens leaves 12-15" × 1½"

A. fourcroydes Jacobi p. 107. may be a larger leaved variety with a scarcely grooved terminal spine. acaulis; leaves 4½ feet × 4½ inch

(A. elongata Jacobi p. 108 I would also unite with this if he did not expressly state that the spine was canaliculate. caulescens — leaves 2½-3' × 2"

Of none of the 3 the native country is known, nor their inflorescence

A. Karwinskii Zuccar. Act. N. Acad. Leop. Car. 16. 2. p. 677 Jacobi 93 (1842! caulescens terminal spine not grooved, but decurrent; leaves bright green
caulescens leaves 1½' × 1½"

8204A

			length of leaves	author
Agave	rigida Mill 1768	, Vera Cruz	1½ feet	Jac.
	angustifolia Haw. 1812		1½ feet	Jacobi
	Karwinskii, Zucc. ~~ap. Salm~~ 1842		1¼	Jacobi
	Ixtli Karw. ap. Salm 1859	, Yucatan	1¼	Jacobi
?	fourcroides Jacoby 1865		4½	Jacobi
??	elongata Jacobi 1865		3	Jacobi
	Sisalana Perrine 1838	Yucatan cult	4–6 feet	Perrine
Chelem	Schott	Yucatan, native	1½–2	Schott
Sacci	"	" cult	5–6	"

11 120

11
12
23
11
132

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MISSOURI BOTANICAL GARDEN

"the common wild plant"

Leaf of Schott's Chelem ✓ No. 201
22 inches long 20 lines wide
with sharp rather unequal
teeth, and a somewhat
twisted stout very sharp terete
elongated spine, slightly
scooped at base, 9 lines long
$1\frac{3}{4}$ lines diam at base

Schott says that all the native &
cult. forms have leaves 12 or 13
times as longer ~~or wide~~ than wide.
22 inches to 20 lines is = 13 : 1

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